THE GENESEE FARMER.

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THE GENESEE FARMER.

SATURDAY, MARCH 22, 1834.

Publisher's Notice.

☞ The subscribers to this paper have been so prompt in discharging their dues that we have not heretofore found it necessary to remind them of the necessity of "paying the printer;" but from recent arrangements in our business it becomes necessary to urge those who are in arrears to forward the several sums due as soon as possible.

☞ We would also remind the subscribers to the present volume, that they may save fifty cents by immediately forwarding two dollars as advance payment. We commence this week, the publication of a list of those who have already paid, which will save us the trouble of sending receipts, and shall continue it as long as we continue to receive advance payments.

☞ It will be seen that our list is headed by the munificent subscription of JOSEPH FELLOWS, Esq. of Geneva, for 25 copies. This is the second *Fifty Dollars* which we have received from that patriotic gentleman.

New mode of destroying Caterpillars.

The parent moth of the common caterpillar, lays its eggs on the small branches of our fruit trees, cementing them together with a gummy substance which preserves them from the weather. The *deposit* has often some resemblance to an open-ended thimble; but its form is not always regular, and sometimes it extends but little more than half round the twig. Our friend CHARLES GIFFORD of Ledyard, had observed that these are generally placed *on the lower branches*, and for several years has been in the practice of picking them from his trees before the warmth of the season was sufficient to bring forth the young insects. The destruction of every deposit prevents the ravages of a nest of caterpillars. He is decidedly of opinion that it is the most expeditious and economical way of ridding an orchard of this nuisance; and we fully concur after having made a fair trial. The eye soon becomes practiced in this search; and what at first seemed difficult to find, is eadily detected.

This work may be done at any time previous to the opening of the buds. From an examination made on the 4th instant with a microscope, we found the eggs already hatched, though the young animals keep in their cells; and there is no danger of their going forth till the leaves begin to expand. We estimate from a slight inspection, that the eggs will average about 300 to each deposit.

We have no recollection of having seen a nest of caterpillars in a pear tree. The cultivated cherry has a few; the peach suffers more, perhaps not less than the apple, or the crab; but the wild cherry is the great favorite. We have seen the nests on one tree, united for more than ten feet in length.

It may therefore be proper to examine some trees more closely than others; and though we may care but little about the wild cherry, we must bear in mind that these insects, under the present arrangement of things, are our enemies; and that if we allow them to multiply, the more of them we shall have to war against another year. Some farmers who seem to believe there is no use in destroying insects, have had their orchards in a few years partially covered with nests; and we have seen some trees in the last season that had lost every leaf.

We think it better to be up and doing. Should some of these deposits be overlooked, which is not unlikely to be the case, the orchardist may then resort to the common methods for destroying the few nests that may appear.

On the Burning of Water.

In a late number of Silliman's Journal, there is a communication on the *combustion of water*, by SAMUEL MOREY, whose name has long been before the public. It is a very interesting paper. It appears that he has been engaged in experiments on this subject more than *twenty years*. He says, "I have no doubt that I have tried *lamps, stoves* and *machines* in more than *four thousand different forms* for effecting these purposes; and yet not many months have elapsed *since I have felt entirely satisfied.*"

We omit several pages of theoretical reasonsoning, and confine our extracts entirely to *the results:*

"The experiments which I have made, have proved practically, that an engine with a power equal to driving a boat four miles an hour, and a rail road car twice that distance in the same time, with ten or twelve passengers, may be made for one hundred dollars: and that the engine with its preparing vessel, (a substitute for the boiler in the steam engine) *need not weigh one hundred pounds*, —and the expense of working it will not exceed *ten or twelve cents per hour.* There are certainly no difficulties to be removed. These facts have been *verified practically and repeatedly* before hundreds of people.

"Some recent improvements in the mode of constructing *lamps for burning water* to produce light and heat, have perfected the operation for these purposes. It now carries demonstration in every form. For instance, when you put but one-fourth of a gill of spirits of turpentine into the lamp and as much water, and raise the temperature to less than that of boiling water, the vapor that comes over will be in the ratio of about equal parts of each. If, in the combustion of these vapors, a due proportion of air is mixed and inflamed, it will in a few minutes boil a two quart copper tea kettle. If small brass wire is brought over and in contact with the flame, it instantly drops in pieces—small copper wire is readily melted—fine iron wire, if the proportion be right, is instantly inflamed—and thin sheet copper with a small piece of silver, or silver solder on it with borax, being exposed to the flame, the silver melts in a few seconds, and the copper very soon: and this is done while the vapor is not concentrated in any way, and issues only with a velocity about the same as that of gas in gas lights.

"This discovery gives every promise of supplying a much cheaper fuel, (as a fuel) exclusive of a clear saving of light, than any one now in use. It is my intention to introduce my lamps, &c. into use as soon as I conveniently can."

The following remarks by Professor *Silliman*, will show how much importance may be attached to these discoveries:

"We have seen some of Mr. *Morey's* experiments, and can testify to the correctness of his statements, as regards the great amount of heat and light evolved by combustion of the vapor of water mixed with that of spirits of turpentine or alcohol, and duly modified by common air. *The results are very striking and beautiful*, and we can see no reason why they should not prove of *great practical utility.*"

Review of Thacher's American Orchardist.

The following observations on the soil suitable for nurseries, are very judicious and deserving of particular attention:

"It has been a received opinion, that the soil for a nursery should not be made rich, as the plants when removed to a more fertile soil, will flourish more luxuriantly; but later observation has decided that the reverse of this will be found correct. There is a close analogy between vegetable and animal life; and it is a dictate of nature that both require a full supply of nutriment from their earliest existence. It would be absurd to suppose that the tender roots of young seedlings are capable of drawing sufficient nutriment from a barren and uncuitivated soil; and those that are barely supported, or nearly starved at first, will never afterwards become vigorous, stately and handsome. Repeated experiments have proved that a strong and vigorous plant, that has grown up quickly, and arrived at a considerable magnitude in a short time, never fails to grow better after transplanting, than another of the same size that is older and stunted in its growth. Where the soil is poor and lean, trees in every stage of growth, are observed to be languid, weak, and stunted; while those reared in a good mellow soil always assume a free growth, and advance with strength and vigor. It is evident therefore, that the ground to be occupied for a fruit nursery, requires to be made rich and fertile."

We were rather surprised to find the following remarks:

"The art of engrafting has not, it is believed, been traced to its origin. In a treatise published by Parkinson in 1629, both grafting and inoculating are mentioned, but the period when the practice commenced has not been ascertained. According to Mr. Yates, (letter published in Forsyth's treatise) the art was introduced into America by Mr. Prince, a native of New-York, who established a nursery in its neighborhood about sixty years ago."

Without having made any particular researches on this subject, we recollect that both VIRGIL and OVID have mentioned this art; and the Apostle PAUL, a few years later, alludes to it as a practice well known to the Romans. "And if some of the branches be broken off, and thou being a wild olive tree wert *graffed* in among them, and *with them partakest* of the root and fatness of the olive tree,—boast not against the branches; but if thou boast *thou bearest not the root, but the root thee.*"—Rom. xi. 17, 18.

As grafting was well known in England when the first colonists came to this country, it is absurd to suppose that the art was first introduced into America (now) only about seventy years ago.

In another part of the United States, we saw ancient orchards of *grafted* fruit more than forty years since, and which must have been planted in the early part of the eighteenth century.

The following directions for ROOT GRAFTING may be worth knowing, "when stocks," as Dr. T. observes, "cannot readily be procured."

"A piece of the root of a tree of the same genus, [species] well furnished with fibers is selected, and a graft placed on it, tied and clayed in the ordinary way. Thus united, they are set with care in a trench in the ground, the joining being covered, but the top of the graft being left two inches above ground."

Dr. T. remarks, "By the process of budding, we obtain the same result as in grafting; with this difference however, the bud being a shoot in embryo, *grafted trees usually produce fruit two seasons earlier than budded trees.*" We apprehend the graft has no advantage over the bud, except when the former has more room allowed it, which is very frequently the case; but where both *start together* in the spring, under circumstances equally favorable, we have not observed any difference. Grafting indeed may be performed in the latter part of winter, or very early in the spring, so that the graft may be started and growing before the bark of the stock is sufficiently loosened by the rising sap, to admit a bud; and therefore half a season's growth may be lost to the latter; but we have not discovered,—and our experience has been that of many years,—that a graft can have any other advantages over a bud.*

"The bud should always be of the *same genus* with the tree or branch which is to receive it." This is incorrect. It is only necessary that they should agree to a certain extent in their constitutional temperament. Thus the peach tree forms an excellent stock, as we have found to our satisfaction, for two species of apricot, the common and the black, which belong to a *different genus*. On the contrary, some species of the *same genus* will not serve as stocks for each other, as the common cultivated cherries, and the wild (board) cherry of our forests. Plums and cherries are also *congeners;* but we know of no instance in which any of the common kinds have been successfully employed as stocks for the others.

In budding he recommends the wood to be extracted from the bud before the latter is set; but remarks very justly, "If the extraction of the wood occasion a hole at the bud, *that bud is spoilt*, and another must be prepared in its stead; as gardeners speak, the root of the bud has gone with the wood, instead of remaining with the bark." These reasons have been conclusive with us, against removing the wood at all,—long before we read Dr. T.'s Orchardist however; and we have never been able to discover that there was any advantage whatever in the process. *To leave the wood in*, renders budding a far less tedious and troublesome operation. *Kenrick* calls this way the *new* or *American* method. *M Mahon's* Gardening is the oldest book in which we have seen it mentioned, but we practiced it several years before the publication of that work.

Dr. T. gives the practice of an intelligent cultivator, in pruning young trees in the nursery, which we consider very judicious:

"Mr. *Cooper* remarks that the side shoots *should not be cut close to the stem*, as the whole growth is thereby forced to the top, which becomes so weighty as to bend and spoil the tree. A better method is to cut *the ends of the side shoots*, which will encourage the growth of the trunk, until it acquires strength to support a good top. The side shoots may then be cut close. In forming the top Mr. C. has found it necessary *to lighten the east and northeast sides*, as fruit trees generally incline that way; and *to encourage the branches on the opposite quarters*, TO KEEP THE SUN FROM THE TRUNK; otherwise the rays of that luminary, when striking nearly at right angles, will kill the bark, bring on canker, and ruin the tree."

At page 49, Dr. T. again recommends to us, when transplanting young trees, to cut them "down close to the ground." We think such a practice highly pernicious; and have no confidence whatever in the anonymous writer whom he cites as an authority. It is not difficult to prevent the trees from being injuriously shaken by the wind, without cutting them down. It requires less effort in a tree to expand the leaves of a bud already formed, than to produce a new bud. This is finely exemplified in a newly set graft. When the buds happen to be damaged, as we have sometimes observed them in the apricot, though the stem of the graft may continue fresh for many weeks, we have never seen one that had strength enough to produce new buds. The same principle applies to a tree that has lost all its buds by being cut down. It may indeed be more successful than the graft in producing others, but if it does, it is because it happens to be capable of a *greater* effort. Why did the graft perish? It had no leaves to *draw up the sap*, or rather to afford it an outlet, and consequently to produce a current in that direction.

Professor *Lindley* must be considered high authority on this subject. He says that transplanted trees "*should not be headed down the first year*, nor will they require to be headed down afterwards, in such trees whose growth is upright; but such as are of a pendent growth *should remain till they are well established in the ground;* and *may then be headed down.*" In giving directions for the treatment of dwarf trees, he also says "*they should not be cut down when planted*, but should stand a year, and *then be headed down.*"

(*To be continued*) V.

For the Genesee Farmer.

On the Use of Plaster.

MR. L. TUCKER—Yours of the 7th of June last, respecting the use of *Plaster*, is now before me; and this being the season in which farmers are bringing home their plaster, an answer ought not to be longer delayed.

You ask of me that I should state, "First—on what kind of soil it is found most beneficial. Secondly—the quantity used per acre, and the time and manner of applying it each year. Third—the course of culture, or series of crops raised on lands to which it is applied for a number of years. And all such facts as it would be necessary for a new beginner to know, to use plaster to advantage."

Plaster has been applied, advantageously, in this part of the country on a variety of soils. The farm I cultivate has, for many years, at least twenty, received liberal applications of plaster, and embracing as it does a variety of soils, I am enabled to judge of its effects for a series of years. The varieties of soil as indicated by the timber which grew upon them, are Oak and Hickory—Maple, Bass, and some Beech—another, heavy Pine timber, with Hemlock—a part was timbered with a young growth of Maple, while Oak lay decaying on the surface. On all these varieties, we consider plaster very beneficial, and as yet have not discovered its effects less beneficial. I have never but in one instance used plaster on deep alluvial soil; and then, by experiments made on some rows of corn, while others were omitted, no effect was perceived.

On grass lands, where plaster has been sowed on strips by way of experiment, a person in passing over such grounds in a morning will find the plastered grass more filled with dew than where no plaster has been put, one of the effects of plaster being to draw moisture from the atmosphere. Low moist grounds consequently do not require plaster as much as high dry lands; and at present I consider it very doubtful whether it will at any time be found of much use on wet land.

The second inquiry is—"The quantity used per acre, and the time and manner of applying it." Much has been said about the quantity proper to be sown at one time. In certain parts of Pennsylvania, where the Nova Scotia plaster is used, only one half of a bushel is put upon an acre at one time. The cost of plaster will upon examination be found to regulate to a great extent the quantity used in every section of the country. In this county, where the best of ground plaster can be had at the mills for $2,50 per ton, a large quantity is used. The quantity used here by our best farmers, at one application, varies from one to three bushels per acre. Experiments have been made of larger quantities—and it is supposed by intelligent farmers with whom I have conversed, that the greater the quantity the longer will the effects remain. The general practice here is to sow two bushels per acre, and I think in ordinary cases this is enough.

"The proper time to apply plaster" for wheat, is in the spring of the year as soon as the ground has become settled; on oats, as soon as it comes up; corn, at the first hoeing, (a small handful on each hill;) on pasture, as soon as the grass starts.

The manner of applying it commonly adopted here is, sling a bag over the shoulder, and sow in lands. The best way to carry the plaster is to have a box of the following dimensions, made to curve a little to the body: two feet six inches long, one foot wide, and six inches deep; attach a strap to the inside corners, pass it over the right shoulder. A place should be cut through the outside of the box, or a hadle put on like the handle of a corn basket, that the man can take hold and assist with his left hand in carrying. It has been recommended, in the Farmer, I believe, to sow plaster with a shovel from a wagon, having it moving about the field. This is a method I have never seen practiced, and probably never shall.

"The course of culture or series of crops raised on lands to which it is applied for a number of years." Plaster is used in connection with clover to a great extent by our best farmers. Clover seed is sown on wheat in March, then plaster. The clover seldom fails, the plaster protects the young plant during the early drouths. The next year early in June the clover is turned under; there it remains until after harvest: the land is then ploughed and sown to wheat; the next

* In another place he says that buds will "if the season prove favorable shoot two or three feet in length before winter, and *will produce fruit as soon as if grafted.*" We did not perceive this *discrepancy* till after we had written our remarks.

spring clover seed and plaster is sown again. The clover is made vigorous by the plaster, and a large growth being turned under, a permanent manure is thus put upon the land, which manure I hardly think would have been improved by passing through the barn yard. By some farmers it is thought to be good practice to use plaster on the following crops, in the order in which I place them: Commencing with grass land, break it up, plant it to corn, the next year sow it to oats, the same fall sow it to wheat, the next spring seed it with clover, pasture a few years and again subject it to the plough; thus making the land by a comparatively small amount of labor, produce three crops.

The last requisition you make of me is, that I should "give such facts as it would be necessary for a new beginner to know, to use plaster to advantage."

Having occupied so much space in your paper already, I will only caution the inexperienced against buying plaster that has been kiln dried, (an expedient sometimes resorted to by dealers in the article to make it grind easy,) as it is supposed to be injurious. It should be ground fine, the finer the better. Finally, be cautious in adopting entirely the opinions of other men, but experiment for yourselves. Sow some lands and leave others—put plaster on some rows of corn and leave others—in short, be cautious in the beginning, and a few years of observation will enable you ever afterwards to act knowingly.

Feb 26, 1834. ONONDAGA.

For the Genesee Farmer.

The Maple, and Maple Sugar.

There are few of our native forest trees, or indeed of any other, more valuable than the sugar maple, (*Acer saccharinum*) or which is rendered available for more purposes. For fuel it is exceeded only by the hickory—as an oramental tree for parks or avenues, it is unequaled—some varieties of its wood, such as the curled and birds-eye, are scarcely less beautiful than the finest mahogany—in its abundant juices is found a substitute for the sugar canes of the south—three fourths of the pot and pearl ashes made in this country, and which forms so important an article of export from the northern states, is manufactured from its ashes—and spread as it is over an immense tract of country, extending from the 36th to the 48th degree of latitude, and in longitude half the width of the continent, it promises to be inexhaustible. In the improved parts of our country, the maple is mostly found in groves where it has been preserved for the sake of the sugar its sap affords.

Many writers on the resources of the United States, have maintained that from this tree a sufficient quantity of sugar for the consumption of the country might be produced; but this is doubtful, and the ability, if it ever existed, is, from the rapid destruction of the tree, yearly becoming less. Farmers however who have these trees, and most of those in Western New-York are of this class, should avail themselves of the advantage, and cease as far as possible to rely on the production of other states or other countries. No farmer acts upon his best interests, who purchases from others what his own farm and own labor can profitably produce. The superiority of maple sugar when properly made over other sugars, is a great inducement to care in the management of the business; and it is well known that the labor employed in its production, is required at a season of the year when it would be of little avail for other purposes on the farm.

The proper season for commencing the business of making sugar, depends almost entirely on the forwardness of the spring, but usually varies from the first to the fifteenth of March. In order that the sap should flow freely, the frost must be mostly out of the ground, and a degree of warmth sufficient to cause the minute vessels in the tree tops to expand rapidly, must exist in the air. The number of trees to be tapped, depends on the means of disposing of the sap nearly as fast as it flows, and on the quantity of sugar it is intended to make. In ordinary seasons four pounds to a tree will not be too high an estimate, but it is evident the product must be very fluctuating. The trees should be bored with a half inch or three quarter auger; if half inch, three spouts, (and for this purpose the common sumach is the best of any thing I have ever seen tried,) if three quarters, two spouts may be placed to a bucket. In tapping trees, care should be taken to inflict upon them the least possible injury; and as the sap mostly flows in that part of the wood nearest the bark of the tree, the auger should not penetrate too deeply; from one and a half to two inches in the wood is sufficiently deep for every beneficial purpose. On no account whatever, where it is desirable to retain the tree in health and vigor, should they be boxed as it is termed with an axe. A small hole bored with an auger soon closes over, and the injury which inevitably results from any wound to the wood of a tree, is thus quickly arrested and removed, while an incision with an axe leaves a place which it requires years to heal over, and which frequently produces a decay ending in the destruction of the tree.

The sap should be boiled away immediately after it is gathered from the trees, or it is liable to be white, sour, and of a ropy consistence, in which state it is lost for the purpose of making sugar. There is no little neatness and skill required in the management of a sugar establishment, if a first rate article is desired—and no farmer who has a particle of the respect he should always feel for the credit of his profession, should be content with an inferior kind. The buckets, the receivers, the kettles, should be kept scrupulously neat and sweet; the sap and the syrup when boiling should be carefully scummed and cleansed, and there will be little doubt as to the quality of the sugar; whereas a different course produces the tarry, viscous material, which is sometimes attempted to be palmed off as maple sugar. Two quarts of milk stirred into the syrup when cold, and the whole gradually raised to boiling, will completely cleanse a quantity of syrup sufficient to produce thirty-five pounds of sugar. After the milk is put in, the syrup should not be agitated in the least, until the impure mass has risen to the surface, and is ready to be removed by skimming.

A neighbor of mine, a gentleman noted for the excellent order and success of his farming establishment, and who rarely fails of having sugar of good grain and fine quality made at his works while others entirely fail, makes use of lime as a corrector of the gallic acid, which at an advanced period of the sugar season, or where the sap has stood for some time, renders the conversion of the syrup into sugar impossible. His method is to prepare a strong lime water, and when the sugar season closes, his tubs and buckets are thoroughly cleansed in this preparation before being laid away in his store house. They are again submitted to a cleansing of the same kind before they are used in the succeeding spring, and if, owing to an unfavorable state of the weather, the buckets remain without being emptied for any considerable time, and become white and slippery at the bottom, the same process is again gone through with. Should more sap flow than can be boiled away as it is gathered, it is stored in a large tub or reservoir holding many barrels, and a handfull of lime is occasionally thrown into this, and if necessary stirred up. By this simple and easy process, the whole expense of which does not amount to fifty cents a year, he has rarely failed of making during the whole sugar season, sugar of the first quality. In making sugar, as in all other kinds of business, it should always be remembered, that whatever is worth doing at all is worth doing well, and that he who does his work by the halves is but half repaid for his labor.

Otiseo, March, 1834. W. G.

Vernal Flowers.

In a letter of the 8th instant to the Publisher.

We seem to have Spring in earnest. On the 5th instant the Snow Drop (*Galanthus nivalis*) was in bloom, which is *sixteen days* earlier in the season, than last year. The Winter Aconite (*Eranthis hyemalis*) also opened on the same day.

In this climate, these flowers are strictly vernal, never appearing in Autumn, but forcing their way upward through the frozen ground, after the days lengthen and the weather becomes mild. As plants in a growing state have a warmth of their own, independent of surrounding substances, it appears that they must often thaw the frozen crust by pressing their heads against it.

The Winter Aconite is a native of Italy. In Loudon's Encyclopedia of Plants, the generic name is translated the EARTH-FLOWER, "because the bright yellow blossoms, seem to lie upon the earth. A pretty little tuberous rooted plant, valuable for the early period at which it flowers."

The Heart's Ease (*Viola tricolor*) was in bloom on the 7th.

The Cloth of Gold (*Crocus susianus*) is almost as early as the Snow Drop. Mine would open to-day were it not stormy, although the snow from being shaded, lay two days longer on that part of the garden.

AGRICULTURAL SCHOOL.—In the Senate of this state, on the 15th inst. Mr. Sudam, from a joint committee on that subject, read a long report recommending the establishment of a State Agricultural School, and introduced a bill for that purpose.

☞ The Publisher of this paper has received from Wm. Thorburn, Seedsman, Albany, an assortment of Annual and Perennial Flower Seeds, comprising 53 sorts. These Seeds were raised at the *Albany Nursery* the past season, and are neatly done up in labelled papers—price 6 cents per paper.

☞ To enable us to finish Judge BUEL's Address, we have been under the necessity of postponing several communications intended for this number.

For the Genesee Farmer.

Cattle--No. V.

THE MIDDLE HORNS.

The controversy which was so long carried on in regard to the original breed of British cattle, has long since been abandoned, and the evidences in favor of the Middle Horns, are now generally conceded to be conclusive. Without going into the details of this controversy, I will simply state the argument on which the claim is principally founded. The Middle Horns, from time immemorial, have been found in those sections of Great Britain which were never wholly subdued to foreign dominion. The fortresses of Cornwall and North Devon, the mountains of Wales, and the Highlands of Scotland, were the constant retreat of the native Britons, when overcome and pursued by their successive invaders; and as their cattle then comprised a large part of their moveable property, it is probable that they participated with their owners in the same protection, and were thus preserved from the general devastation. At all events, it is in these districts that the Middle Horns have always prevailed, and there is no contravening evidence that they were *not* the aboriginal breed.

But this is a matter of little importance to our present purpose. It is certain that such a race has long existed in almost every part of the British Islands, and still forms the predominant breed of British cattle.

It is difficult to point to any particular localities where the Middle Horns have prevailed more than in others, unless it may be Devonshire, Wales and Scotland, for they are very generally extended throughout the United Kingdom. And although they assume almost every form, quality and color, according to circumstances and climate, they all retain the same general characteristics. They are all emphatically *Middle Horns*, forming a distinct and peculiar breed.

Their general characteristics may be thus expressed: "Tolerable, but not extraordinary milkers, and remarkable for the quality, rather than the quantity of their milk; active at work; and with an unequaled aptitude to fatten." Their horns are usually of a light color, verging toward a yellow, and of a middle length, varying according to situations. Their color assumes every hue, from black to a deep red, and even to pied or white. In Scotland they are very generally black; in Ireland, pied; in Herefordshire, pied, or more usually red with a white face; and in Devonshire, of a beautiful deep red.

In Ireland, this breed, if not aboriginal, is of such early origin as to defy investigation. They are generally small, and exceedingly hardy, and usually found in the mountainous parts of the country. They live through the winter upon the highlands, and sometimes thrive exceedingly well; but when removed to a milder climate and more luxuriant soil, they fatten with celerity. They are generally good milkers, and being hardy and easily kept, they become emphatically the *poor man's* cow. They are easily susceptible of improvement, as their increased size and beauty in the lowlands fully prove. In the county of Cannaught, they are said to have almost equaled in excellence the improved Devons. Innumerable crosses are however constantly going on, and the original character of the native Irish cattle will soon be merged in the general rage for improvement.

There is no part of Great Britain where the Middle Horns are so prevalent, or more distinctly marked, than in Scotland. They are there, however, divided into different varieties. In the north highlands and Shetland islands, they are a small, coarse and inferior race, hardly deserving the name of cattle. Farther south, to the east and west, they assume a different aspect, and especially in the West Highlands and Hebrides, where they have taken the name of *Kyloes*, they are celebrated for their hardihood and aptitude to fatten, even on the scanty food of their native hills. The Arran and Bute, the Argyleshire and the Inverness breeds, are decidedly Middle Horns, though larger and of much better qualities than the Kyloes. Throughout these districts, the fundamental principle of breeding is, "that the size and quality of the animal must be determined by the *soil* and the *food*, and *that it is far more profitable to the farmer to have the size of his breed under, rather than over the produce of his farm.* Both will gradually adapt themselves to the soil, but the small beast will become more bulky and improve his points--the large ones will degenerate in form and even good quality." Experience and observation have forced them to the fact, that "*the grand secret of breeding is to suit the breed to the soil and climate.*" As the climate of Scotland, and the northern and middle sections of the United States, are somewhat similar, I shall have occasion again to revert to this important fact.

In the northeastern districts of Scotland, the Kyloe breed is evidently predominant, though the difference of pasture and climate has given them a larger and more approved form. The Aberdeenshire, the Angus, the Fifeshire, and the Sterlingshire cattle, are all Middle Horns of the Highland breed, but still so changed by cultivation and by crossings, that each exhibit characteristic differences, more or less desirable. But as all these sections of country are so wholly devoted to grazing with a view to flesh, the milking qualities of the cow are not in so high estimation, as their aptitude to fatten, with the least possible nutriment.

Advancing still father south and into more luxuriant pastures, the cattle have undergone a proportionate change. They are still decidedly Middle Horns, but vastly improved in all the essential qualities which constitutes excellence.

The lowlands of Scotland, comprise by far the greatest part of its population, and it is here, therefore, that the more northern counties find a market for their surplus cattle. Here, also, as there is greater advances in agricultural improvements, we should naturally look for a more intelligent cultivation of stock. Accordingly we find, that throughout the lowland districts, the cattle are all of an improved character, and many of them held in the highest estimation, not only for their grazing qualities, but pre-eminently for milking.

The soil in the vicinity of Edinburgh and throughout the Lothians, is rich and highly cultivated, and yet the cattle in these regions have no specific native character, save that they are generally Middle Horns. "The Ayrshire breed, which was only introduced in 1820, has gradually prevailed, but the English Short Horns are kept by many who look for profit in the *quantity* and not in the *quality* of the milk." It is therefore to the more southern and luxuriant part of Scotland, that we are to look for improvement in breeding.

The district of Dumbartonshire, Ayrshire and Lancashire, are among the most celebrated. These are manufacturing districts, and thickly populated. "The soil and the climate are admirably adapted to the rearing and fattening of stock, and a more valuable breed, and particularly of dairy cows, is not to be found in the world." The Dumbartonshire and the Lanarkshire are of the Highland breed, but selected and improved, crossed and re-crossed, so often and so effectually, as almost to have lost their original character. "The Highland cow is now rarely met with, as she has been superseded by the *Ayrshire*. The Alderney, which is a foreign breed, was tried, but was found not to answer. She was crossed, but with no success, by the native bull. The Durham was afterward attempted, but all have given way to the *Ayrshire*." The Ayrshire breed may therefore be considered as the prevailing breed throughout the lowlands of Scotland.

As I propose to devote one entire number to the particular consideration and description of the *Ayrshire* breed, from its pre-eminent excellence, I will not now dwell upon it. Suffice it to say, that it belongs to the Middle Horn variety, originated in the county of Ayrshire, is of a peculiar breed, and presents excellencies of a rare and extraordinary character.

Passing into Wales and England, the Anglesey, the Glamorgan, the Pembroke, the Sussex, the Herefordshire, the Cornwall, and the Devonshire cattle, were all of the Middle Horn breed. The mildness of the climate and a high state of cultivation, of course had an important bearing upon the character of the cattle, and each of these districts by some peculiar mode of management, or by some accidental crossing, or from adaptedness of climate or food, reared each its peculiar and distinct breed. These various breeds are now undergoing still greater changes from the introduction of the Short Horns, and whether they will ultimately retain their original or acquired character, or become wholly supplanted by their more successful rivals, time alone can determine.

Although there are many varieties of the Middle Horns which are deserving of particular notice, my limits will not allow me to dwell upon more than two or three. I will therefore confine my subsequent remarks in reference to this breed, to the Devons, the Herefords, and the Ayrshire breed.

QUERCUS.

For the Genesee Farmer.

MR. L. TUCKER—It is in vain to urge that Agricultural papers are of no use—the short article on making soap, in the Genesee Farmer, 22d February, folio 57, if rightly understood, is worth at least five year's subscription to every family who has soap to make.

Some years ago I was knowing to a circumstance as follows: A man, engaged in the Pot Ash business, had plenty of soap grease and leys. He set his pot ash boiler to manufacturing soap. He used leys from five to ten days old, and the grease would not mix. He worked above four days, and as often as he let the kettles

rest, the grease and ley would separate. This stuff was put into barrels, and some of it sold to a clothier, and came very near spoiling all his cloth, and the rest was mostly wasted. Had the ley been run through fresh lime it would have mixed with the grease instantly, and much expense and risk saved. Ley, on standing a few days, will combine with carbonic acid, and will not mix with grease. Lime will take this acid away, and then there is no difficulty in making soap.

RATIO.

For the Genesee Farmer.

Ornamental and Shade Trees.

A large proportion of the farmers of Western New York, found it a wilderness, and by their industry have made it a fruitful land—yielding abundantly of those fruits of the earth, which are essential to the sustenance of the human family. But it is to be regretted, that while engaged in the laudable work of prostrating the giants of the forest, they did not spare a sufficient portion of the younger timber, in proper situations, to answer the purposes of ornament to their dwellings, and of shade to their cattle in the fields, and to the weary traveler on the roads.

In many of the older parts of the State, the eye is delighted with beautiful forest trees bordering the road, placed there by the hand of man, and nursed with great care—adding to the appearance of the farms, a beauty which nothing else can give. While in this western country, where nature has been more lavish of her bounties, a large proportion of the dwellings, and many of the fields, are without a tree.

The early settlers of a country find that all their exertions are necessary to provide for their families food and raiment. But that is no longer the case with a large portion of our farmers—indeed many of them are in affluent circumstances. The time has arrived for such to display some taste in, and about, their buildings, and on their farms.

In many parts of Europe continuous rows of trees are seen, bordering the roads for many miles. These, with the enclosure of live hedges, give to those countries a beautiful appearance. Millions of forest trees, the seeds of which were planted by man, are now standing on the island of Great Britain; and the fine trees round most of the farm houses, and in the enclosures of that country, are evidence of the taste of the people, and of their regard to their own comfort, and to that of their animals.

The locust, horse chestnut, and weeping willow, and, I may add, the weeping elm, are, in my opinion, the most suitable for the vicinity of our dwellings. For the road side, the maple, elm, and whitewood or tulip tree, are to be preferred. The want of success in removing the maple, I think may be attributed to our taking them from a dense forest, and the want of care in removal. If we were to select such as have stood exposed on the borders of our timber lots; and were sufficiently careful that the roots be not mutilated, or suffered to dry—if they were put in carefully, with rich earth and litter thrown round them to preserve moisture, few would perish.

No tree is more pleasant to my eye than the sugar maple, when growing singly. The dark color of the leaves, and the dense shade, place it, in my estimation, among the handsomest of our native trees. The elm is also a beautiful tree. The tulip tree lifts its head above all its neighbors;—its leaf is of a shining green, and its flower beautiful.

In addition to the gratification to our senses, there is another inducement, which I think will have weight with some. It is that no man of taste, would hesitate to pay 5 dollars per acre more for a farm suitably decorated with trees, than for one without then..

Now is the time to set them out. ONTARIO.

For the Genesee Farmer.

Bees.

When remarking last year in the Genesee Farmer on the cultivation of Bees, I promised to give the future results of my experience on this amusing and pleasant branch of domestic economy. I am therefore most happy to say that all my experiments, three in number, have succeeded fully to my expectations.

Early last spring, I located a swarm in the peak of a very high four story brick store in Buffalo, near the harbor, close by the vessels and steamboats, and directly facing the lake, in a most exposed and windy situation. The hive which contained the bees, was set over a large and long new one with several apartments, which I intended they should gradually fill, if the experiment succeeded to my wishes. The hive was lively, but small; and from the wind blowing immediately off the lake, and often with some severity, there was much of the time they could not work; added to this they were upwards of fifty feet from the ground, and hardly a tree, shrub, or flower, for nearly half a mile's distance. Indeed I anticipated a total failure, and from their weakened condition at the commencement, supposed at best they could only live through the season; and a short time ago I fully determined to remove them, if any remained, into my garden under a good bee house, and replace them over the same hive, it being fifteen feet long, with five separate partitions, yet all connected by openings, so as to allow access from one to the other. Each apartment has a drop floor connected to the front, or projecting part of the floor by butts, and held up by hooks. This I hang up by chains in the bee house, and is built on the Charlieshope plan described in the 3d volume of Genesee Farmer, page 7. The reason why I changed their location was, that I was assured from their exposed and windy situation, they could not labor with half the ease and security that they could in a better sheltered location, and I wished a more convenient position to inspect their operations.

As I observed, therefore, I expected to find them barely alive, not having examined them for months; but on letting down the floor of the large new hive, I found the apartment, a space of 3 feet long, 1 foot high and 15 inches wide, more than half filled with beautiful white fresh comb, and the bees buzzing among it most merily. I then raised up the original hive above it, and found it exceedingly heavy, and full to cramming of bees, as lively and finely conditioned as I ever saw them. I carefully removed and carried to my house and set them in the cellar, and intend as soon as spring opens to set them on the large hive removed into the bee house in the garden, where I hope often to be cheered by their busy murmur through the long days of summer.

This experiment, although not continued for the reasons mentioned, proves most fully that those useful little insects will thrive amid great disadvantages, and at a great hight from the earth. Indeed I have little doubt but in a *well sheltered* position, they will succeed admirably in high brick, stone, or wooden buildings, and at a distance from their food. May they not be even healthier in such a high atmosphere? The bee moth, of which I observed indications when placing the hive, did them no injury. I estimate the swarm to have at least trebled in numbers; and besides filling down the main hive, to have built at least 50 pounds of new comb in the large one.

Another hive which I have in the garret of a brick building in the compact part of the city, has gone on and flourished to my full satisfaction. They have made the past season upwards of 100 pounds of honey and comb, and have increased to most formidable dimensions, there being as near as I can ascertain, upwards of a bushel of bees alone. This hive has been at work two summers, and to my knowledge, has never swarmed. They appear very contented, and having as yet plenty of room, have no desire to emigrate. The moth, although occasionally seen around the hive, has not molested them. I now consider this hive in successful operation. It is the first described swarm in page 5 of 3d volume of Genesee Farmer. I last fall removed the old hive from the top of the long one. It was very full and heavy, and the bees had all left it and gone down to the large hive below.

My next experiment, being the second described in page 5, as above, it will be recollected was only partially filled the year before last. About a bushel and a half of space in the hive remained to be filled. That they finished in good season, besides making up a good box of fine white comb attached to the side during the summer. These also have not swarmed to my knowledge, although evidently pressed during the latter part of summer for room. This hive was in my garret and not dark, the bees having a passage out of a boarded window on a smooth board about 18 inches from the hive. The bee moths were plenty around it, but being well watched, did little damage. Owing to the want of room in this box, holding about 2½ bushels, and the great size of the swarm, I have partitioned off a small dark room in one corner of the garret, from which I have issued a tunnel like that described by W. W. B., in his ingenious and excellent essay, page 84, 3d vol. Genesee Farmer; only my tunnel is one foot wide, one foot long, and one inch depth of space inside the room, and tapering to near a quarter of an inch at the outer end, the more effectually to exclude the moth. I have adopted the house plan in this instance, because it affords the bees more room to labor with less trouble, and I am inclined to test the extent to which a swarm may be increased. If they go on and build their comb to the rafters and slats which I have prepared for them, it can be easily obtained when wanted, and sufficient left for the uses of the hive. I have set the hive in such a position that they can run easily from it on a smooth board to the spout leading out, and I anticipate a great summer's work out of them. Whenever it needs ventilating in the summer, I have only to open the windows and scuttle of the garret, and set open the

door of the bee room at night, and all the fresh air can be admitted that is needed. But they want little fresh air. Heat and darkness are their choice, and if the air be pure around their habitation, it is all they want.

I saw an instance at a neighbor's apiary last summer, where a bee house was so prepared that the whole colony left the hive and went up into a corner of the room, and built large masses of comb on the wall. I have not taken much pains to make my bee room very warm, having it perfectly tight and secure. The influence of the sun is advantageous to them in summer, and they will be as warm in the winter as is necessary; quite as much so as in ordinary hives, and they always cluster together among the thick masses of comb, so that little danger need be apprehended from the cold.

I should be exceedingly pleased to hear from W. W. B. the result of his experiments with his bees. His rural occupations and the occasional leisure allowed him from his professional engagements, have I hope led him into a more minute observation of the natural history and character of this interesting part of Entomology, than the increasing cares of business of the past year has allowed me to do. In fact, what little time I have spent with my bees has been mostly by snatches, and altogether unsuited to deliberate examination.

I do not know that I have any new suggestions to make on the subject of bees, other than those submitted in 3d vol. of this work. The more simple their management the better. At any rate, no one need suppose his bees will thrive without attention, although they require but little actual time and labor. ULMUS.

Address of Judge Buel,

Delivered before the N. Y. State Agricultural Society, at the annual meeting, Feb. 12, 1834.

(Concluded from page 88.)

DIVISION OF LABOR,

Although not so well adapted to farm labor as it is to the mechanic and manufacturing arts, is nevertheless susceptible of being advantageously studied and applied by the husbandman. The process of pin making is subdivided into seven branches, to each of which is assigned a distinct set of hands. The advantages which result from this arrangement may be appreciated when I state, that were the workmen who whiten the pins to perform all the different processes, they would cost in making "three times and three-quarters as much as they now do by the application of the division of labor." † This principle is extensively adopted in manufactures, and is no inconsiderable cause of the reduction in price of their fabrics. It has been advantageously introduced in the farming of Great Britain. Men are kept as much as possible to the same branch of labor, because by becoming familiar with it, they perform more and do it better, as a greater individual responsibility rests upon them. All light work is performed by women and children. A man who can earn six shillings should not be employed on what a boy can do equally well who is paid two shillings per day. Say a farm affords one hundred days of this kind of labor in a year—the gain to the cultivator by employing the boy instead of the man will amount to fifty dollars.

NEW ARTICLES OF CULTURE.

Forty years ago cotton was hardly recognized as an article of culture in the United States. In 1832 it constituted by far our greatest material of export, the quantity exceeding three hundred and twenty-two millions of pounds, and the estimated value falling but a fraction short of thirty-two millions of dollars. In addition to this, the home manufacture of the raw material now gives employment to half a million of our population, while the goods fabricated from it constitute a material source of our internal commerce. Who can pretend to say what will be the great staples of our country forty years hence? Almost every discovery in science calls into existence a new art, and almost every new art furnishes a new demand for some product of the soil. It is the province of wisdom to keep pace with the knowledge of the times, that it may profit by its constant improvements. There is already an increasing demand for products of the soil, which we have the ability to supply, but which we continue to import from Europe. Madder, woad, and weld are essential to our manufactures, and the quantity which is consumed draws no inconsiderable amount annually from our country. Our soil and climate are adapted to their culture, and with a little enterprise and experience we may soon be able to supply the home demand. The madder now imported is computed to cost more than two millions of dollars per annum.

The turnep culture will yet become, as it has proved in Britain, the basis of a great improvement in our husbandry. Turneps are at the same time an ameliorating and a cleansing crop, and are admirably fitted to precede barley or wheat. But their chief value consists in the abundant product, and the adaption of the crop to the wants of all descriptions of farm stock, at a time when succulent food is most wanted, and when it can be but scantily supplied from other crops. The Swedish variety has a decided preference. On lands adapted to their culture, six hundred bushels, or twenty tons of roots from the acre, may be stated as a moderate average crop. The greatest objection to their culture is the labor and expense of securing them for winter use; but this is far greater in imagination than in reality. On this subject I can speak from personal experience. A neighbor raised last year from five acres of land, three thousand bushels, which he has fed during the winter, and upon which he is now fattening more than one hundred wethers, besides oxen.

The raising of mulberry trees and the production of silk is another branch of rural labor yet new among us, which bids fair to become a source of individual and national wealth, and which this Society can enlighten and promote. The experiments already made have shown, that while the business abstracts very little labor from the ordinary employments of the farm, it is susceptible of yielding a handsome income to the farmer. The early attention of this Society in distributing seeds of the mulberry, has done much towards introducing and extending this branch of labor. It is computed that that seed may have produced half a million of trees, and that this number may have been doubled by individual efforts in that time. A new species of the mulberry, (*morus multicaulis*,) has been introduced from the Phillipine islands through France, by M. Perrottet, which promises new advantages in the production of silk. The tree is as thrifty and as hardy and as easily propagated as the white mulberry, while the leaves being much larger, are far more easily gathered, and are said to be better adapted to the production of fine silk than the other species of this tree. This Asiatic mulberry was introduced into France in 1824, and in 1830 it bore seeds abundantly. I would beg leave to suggest that the corresponding secretary be instructed to procure seed of the morus multicaulis, with a view of its being distributed by this Society.

The demand for silk fabrics is already great in the United States, and is likely to increase in a far greater ratio than our population. The importation of silks in 1832 amounted to ten million dollars. As an article of export, the raw material will be in demand for the European, and the manufactured fabrics for the South American market. France imports raw silk to the value of 30 millions francs, and in Great Britain the annual importation of the article exceeds 120 millions dollars. Hence there is little danger of the market becoming overstocked.

The contrast in the profits of good and bad farming is worthy of a moment's notice, as few take the trouble to scan it with care. I have already alluded to the bad management of our hop crop. Had all the hops which were brought to this market the last year been equal in quality to the best, and such they probably might have been with better knowledge and more care in their management—some 20 or 30 thousand dollars might have been put in the pockets of the growers, which they failed to obtain. Let us examine what the difference is in the corn crop. I estimate the cost of cultivating and harvesting an acre of corn at fifteen dollars, and that a farmer will ordinarily plant four acres. His expense then will be sixty dollars. If the crop yields him thirty bushels an acre—and more falls short than goes over this quantity—and he sells the product at fifty cents the bushel, he will be remunerated for his labor, but get not a cent of profit. *Now, if instead of thirty, the acre was made to produce, by good management, eighty bushels, the four acres, at the assumed price, would pay for the labor and afford him a nett profit besides, of one hundred and thirty dollars.* Here then would be a difference, in one year, in the profits of four acres, of $130, all resulting from good and bad management. I beg leave here, as affording to my hands a happy illustration of the contrast I would exhibit, the *practice* of an individual who stands deservedly high as a practical farmer, and as a gentleman of respectability and veracity. I will first show what his land DID produce; and then what it DOES produce. "The land I now till, (he observes in his letter which will be hereunto appended,) *at first*, would not produce, on an average, more than 15 or 20 bushels of corn, ten or fifteen bushels of wheat, barley, or rye, and from half a ton to one ton of hay." By good management, economizing manures, and a proper rotation of crops, he adds, "some of my fields *now yield* from 80 to 100 bushels of corn, 35 to 40 bushels of wheat, 50 to 60 of barley, and from two and a half, to three and a half tons of hay per acre, *and with less labor* (except in harvest) *than when I did not raise more than one third or one quarter as much per acre as I do now.*" The same intelligence and industry, that have trebled or quadrupled the profits of this farm, will produce like results whenever they are diffused and brought into exercise.

I have thus adverted, gentlemen, to those defects in our husbandry, to which I proposed at this time to call your attention, and have endeavored to show their magnitude, and the importance of applying efficient remedies. I will now call your attention to some of the available means of placing our agriculture on a more respectable and roductive basis. The means which I shall particularly commend to your notice, may be embraced under the following heads:

1. A school, to illustrate the principles of science upon which the labors of Agriculture are based, and to teach the best modes of practice.
2. A more general diffusion of useful knowledge, in a cheap form, accessible to the humblest condition in life.
3. Agricultural associations; and,
4. The bestowment of pecuniary rewards, as stimulants to enterprise and industry.

I need not stop to dwell upon the advantages which learning affords to agricultural labor.—Science may be defined a study of the immutable laws of the Creator which govern and regulate mind and matter. The study of these laws, and their application to the wants and comforts of life, have for ages constituted one of the highest and most useful employments of man; and have contributed, more than any other human effort, to refine and elevate us above the grosser and degraded condition of savage life. The concentrated benefits of these labors are not proffered to our hands. The pleasures and the benefits which they impart, are held out as noble rewards to mental labor, in the same spirit that the blessings of health and competence are promised to him who "earns his bread by the sweat of the brow." Labor, mental or bodily, is the inseparable attendant of rational enjoyment. And is that knowledge to be contemned, which has done so much good to the world, and which has countless blessings yet in store for the human family? "In

† Babbage on the Economy of Machinery.

a *theological* view," says a late eminent writer,* "science is nothing else than a rational inquiry into the arrangements and operations of the Almighty, in order to trace the perfections therein displayed. And what, continues our author, are the truths which science has discovered? They may be regarded as so many rays of celestial light descending from the Great Source of Intelligence to illuminate the human mind in the knowledge of the Divine character and government, and to stimulate it to a still more vigorous exertion in similar investigations, just as the truths of revelation are so many emanations from the "Father of Lights," to enlighten the darkness, and to counteract the disorders of the *moral* world."

Our state may be compared to a great family, the members of which are employed in diversified pursuits, all designed and calculated to promote the common weal—having a common as well as individual object, and all united by reciprocal ties. In this light it is considered as respects crime and want. One is punished, and the other relieved, by common consent, and at the common charge. We have erected splendid and extensive establishments for the vicious and the poor. The county of Albany has been at greater expense for its poor than would be required of the state to establish and support a school of agriculture. Would it not evince both prudence and economy to endeavor to *prevent*, or to *lessen*, these growing evils in society, by devoting a portion of the common means to schools, which should teach the hands useful labor, and imbue the heart with the love of virtue? The adage teaches, that "an ounce of prevention is worth a pound of cure." If ignorance be one of the chief causes of vice, and indolence the parent of want; and if knowledge be one of the mainsprings of virtuous conduct, and competence the sure reward of industry,—then the more knowledge is diffused, and the more that industry is encouraged, the less we shall be called upon to expend upon poor-houses and penitentiaries. It no longer admits of doubt, that knowledge and industry are the great conservators of public morals, as well as the great instruments of public wealth.

It has been remarked, that the more we provide for any one class, the more it will increase. This would seem to hold good in regard to the vicious propensities of our nature, and why not in regard to habits that are commendable and praiseworthy?

To speak practically. Our agriculture is greatly defective. It is susceptible of much improvement. How shall we effect this improvement? The old are *too old to learn*, or rather, to unlearn what have been the habits of their lives. The young cannot learn as they ought to learn, and as the public interests require, because we have no suitable school for their instruction. We have no place where they can learn the *principles* upon which the *practice* of agriculture is based—none where they can be instructed in all the modern improvements of the art. It is devoutly to be hoped, that our fathers in council, justly appreciating the importance of the subject, will add another to the proud trophies which New-York has already won in the noble march of improvement, by properly responding to the correct views of this subject expressed in the message of our chief magistrate.

Our periodical publications, devoted to the interests of the agricultural and mechanical classes, have proved highly beneficial, and are daily enlarging the sphere of their influence. These benefits, however, may be greatly multiplied by a cheap work, adapted to the means of persons in humble circumstances, and to the economy of those who are able but unwilling to expend two or three dollars a year for an agricultural paper. It is believed there are more than 200,000 farmers in the state who read little or nothing calculated to improve their knowledge in the business by which they live. With the view of bringing this subject before the society, I have made inquiries as to the price at which a respectable publication of this character can be printed. The estimates have been predicated upon the supposition, that the editorial labors will be gratuitous,—that the subscriptions will uniformly be paid in advance,—that arrangements will be made to give it an extensive circulation, and that an edition of at least ten thousand copies will be disposed of. The result of my inquiries is, that a monthly publication, of 16 quarto pages to each number, making 192 pages in a year, can be furnished in parcels of twenty or more, at twenty-five cents per annum. The postage to any place within the state will swell the cost to the subscriber to thirty-seven and a half cents per annum. An amount so trivial, as to win indifference, and to silence the objections of avarice. I submit to you, gentlemen, whether a more efficient mode of furthering one of the objects of our association, the diffusion of useful knowledge—can be devised, than the one here presented. Through the liberality of two public-spirited and highly respected gentlemen, a specimen sheet of the proposed publication has been published, and has been submitted for public examination. Under the auspices of this society the CULTIVATOR may be rendered a vehicle of useful knowledge, and a means of effecting great public good. I commend it to your guardian care.

In referring to *agricultural associations*, as a means of improvement, I think I shall be sustained by the opinions of those present, as well as by the authority of past experience, in the little I have to say. These associations tend to promote social and friendly intercourse, and an interchange of kind offices; to make our farmers emulous of excelling in their cattle, in their crops, their buildings, and in the neatness and order of their domestic arrangements; they bring them acquainted with each others improvements and means of economising labor; instruct them in the comparative value of breeds of animals and the relative value of crops. They promote industry, frugality, and the love of knowledge. They tend to multiply our comforts and increase our wealth, by the laudable emulation they call into action, and to enlighten and embellish our country.

And yet I am sensible that these associations find but comparatively few ardent advocates among our farmers. Many are indifferent because they do not appreciate their benefits, or from an apathy, common to our nature, in every measure which does not promise present gain. Some will not support them lest they should lose a day or a dollar. And others oppose them from an envious wish to deprive their neighbors of that public commendation which they are conscious they do not themselves deserve, and are not likely to obtain. The man who thinks and acts only for *self*, regardless of the welfare of those around him, and who fancies that he rises because others sink, mistakes alike his interest and his duty, and is a stranger to those ennobling feelings which flow from disinterested acts of benevolence and philanthropy. If the comparison may be tolerated, I would liken the selfish man to the moon, whose sombre rays impart no vivifying influence upon terrestrial objects:—and his contra to the sun, shedding abroad on every side his effulgent beams, and dispensing life, light and gladness to all around.

The remaining subject which I proposed to notice, is the awarding premiums for beneficial experiments and improvements in husbandry. I confess I am not satisfied of the utility of paying for the *largest* products or the *fattest* animals, yet I believe there are many other subjects on which premiums may be awarded with public advantage. If my neighbor shall be induced, by the expectation of a premium, to make some new application of science, or some new experiment in practical husbandry, which shall prove successful, and lead to important public benefits, we become gainers, however expensive the investigation on the experiment may have been to him who obtains the premium. In this way great public improvements have accrued; and like means will produce like results. These rewards are often the exciting cause to active industry, philosophical research, and to the development of inventive genius; which, like the seed, whose latent vitality is quickened into action by solar influence, grows, expands, and matures into fruits of usefulness. Go to the American Institute at New-York, and see the numerous productions which its premiums are eliciting from science and art. Look at Scotland, a country, which is surpassed by none in recent improvements in husbandry, and where agricultural premiums have been awarded for fifty years, and see its society distributing nearly ten thousand dollars a year, as rewards for diligence and skill displayed in her rural affairs. But I need not seek for illustrations abroad. They abound in every county in our state where premiums have been awarded. Upon this subject I quote again my highly respectable correspondent, who remarks in strong language—"I have no doubt that the money which was appropriated by the state to encourage agriculture, has increased the wealth of this country more than twenty per cent a year."

I have thus gone through with what I proposed to embrace in this address. I have pointed out some of the prominent defects in our husbandry, and have suggested means of remedying them at least in part. The means are partially at your command, and over them all you can exercise a salutary influence. I hope the present opportunity will not be suffered to pass without a united and successful effort to advance the objects of public usefulness for which we have associated, and for which we have met on this occasion.

*Dick on the Improvement of Society by the diffusion of knowledge.

For the Genesee Farmer.

Ornithological Note.

There is reason to believe that in early seasons more especially, some migratory birds visit us from the south before the main body consider it prudent to attempt the journey. In this way I would account for the difference of their arrival in different parts of the Genesee Country, of which records were made in your 3d volume at pages 98, 99, 162, and 236.

On the 22d *ultimo* the song sparrow was seen and heard in this neighborhood, but not within a mile of the old hedge near us which has been a favorite resort for them several years. At this place they first appeared on the 7th instant; which is *twelve days* earlier than last year. In those different flights none came against the wind. A *voyage* of three hours might bring them hither from below the mountains.

PRICES CURRENT.

ARTICLES.	PER	*March* 22. ROCHESTER.	*March* 15. NEW-YORK.
Ashes—Pot....	100lbs.	$3,00.....	$4,20 a 0,00
—— Pearl..	.....	3,25.....	4,55 a 4,60
Beeswax, yellow	lb.	0,16 a 0,18	20 a 21
Candles, mould	.....	0,10 a 0,11	12. a 13
—— dipped.	.....	0,10a0,10½	11 a 12
Cloverseed.....	.....	.....	7½.a.8½
Flax, American.	.....	.....	9..a.11
Flax seed, clean	tierce	9,00a10,00	12,50a13,25
Flour, Western.	barrel	4,50.....	4,75 a4,87
Grain, Wheat..	bushel	0,75.....	.....
—— Rye....	.....	0,62.....	56.a..00
—— Oats...	.....	0,25.a..27	35.a..36
—— Corn...	.....	0,46.....	60.a.62½
—— Barley..	.....	0,50.a..56	72.a..74
Hemp, Americ'n	ton	.....	130 a 150
Hops, 1st sort .	lb.	.....	18.a..20
Plaster Paris...	ton	6,00 a 0,00	2,88 a4,25
Beef, Mess....	barrel	0,00 a10,00	8,75 a9,50
—— Prime....	.....	0,00 a 8,00	5,75 a 6,00
Pork, Mess....	.....	13,00a14,00	13,00a14,25
—— Prime....	.....	11,00	10,00a10,75
—— in the hog.	100lbs.	4,50 a 5,00	.....
Hog's Lard....	.....	8,00 a 9,00	8,00 a 8,50
Tallow.....	.....	7,50 a 8,00	7,50.....
Hay.....	ton	6,00 a 7,00	12,50a15,00
Apples.....	bushel	25.a..50	.....
Potatoes.....	.....	18.a..25	.....
Cheese.....	lb.	6.a...8	7½a....
Butter.....	.....	12..a.14	15.a..17

Miscellaneous Selections.

To remove Vermin from Cattle.—A decoction of tobacco is very good, but it often makes the animal very sick for a short time. A better remedy is to mix plenty of strong Scotch snuff in train oil, and rub the back and neck of the creature with it, which will effectually drive away or kill all vermin.

Curwen observes that "the best preventives against fleas in hogs, lice in cattle, and ticks in sheep, are corn meal and good care." Hickory ashes thrown upon swine, not only assist in destroying fleas, but in removing cutaneous diseases, by causing the animals to rub themselves frequently. —*N. Y. Farmer.*

The application of steam to agricultural purposes is said to have called forth a powerful and effective engine in France; and it has, at the same time, produced a steam-digging machine in England. We have lately seen the model of a machine, which, at one operation, could be made to plough, pulverize, roll, sow and harrow a breadth of 10 or 12 feet, at the rate of 5 or 6 miles and, consequently, between 7 and 8 acres per hour. The machine might, no doubt, be impelled at double that rate.—*Gardner's Mag.*

Native Grapes.—The following is the testimony of N. Longworth, Esq. one of the most extensive vine growers in this country: The Catawba is superior as a wine and table grape to the Isabella, and matures its fruit better, though a less abundant bearer. We have native grapes in most of our states, could a selection be made, that would leave us little cause to regret that foreign grapes succeeded so badly with us.

Inhabitants of an Oyster.—Observations with the microscope have shown that the shell of an oyster is a world occupied by an innumerable quantity of small animals, compared to which the oyster itself is a collossus. The liquid enclosed between the shells of the oyster contains a multitude of embryos covered with transparent scales, which swim with ease; a hundred and twenty of these embryos, placed side by side, would not make an inch in breadth. This liquor contains, besides a great quantity of animalculæ, five hundred times less in size, which give out a phosphoric light. Yet these are not the only inhabitants of this dwelling---there are also three distinct species of worms.

Sounds Made by Insects.—No insects have the power of producing sound by the mouth; they do not breathe through the mouth, and consequently have no power of producing sounds by that organ. The sounds are produced either by the quick vibration of the wings, or by beating on their own bodies, or other hard substances, with their mandibles, or their feet. The sound of the bee is produced by the vibration of its wings in the air. The cricket, when it is disposed to be merry, beats time with its mandibles against its head and horny sides in the same manner as a human being, when in good spirits or idle, drums with his fingers on the table. There is a sound which has often struck terror into the souls of the superstitious, and which is frequently heard behind the ceiling, called the death watch. This has been ascertained to be caused by a small species of wood-beetle, and most probably in the same way as the cricket produces its sound, by beating with its feet on the wood.

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